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SOVIET MACHINE TOOLS AND PRODUCTION EQUIPMENT

[Comment: This report presents information on the development and production of machine tools and industrial equipment in the USSR taken from sources published November 1952-31 December 1953. The information is given under the categories: Machine Tools; Tools and Instruments; and Equipment for the Textile, Polygraphic, and Food Industries.

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I. MACHINE TOOLS

MACHINE TOOL FOR GRINDING AUTOMOTIVE CRANKSHAFT JOURNALS -- Moscow, Zavodskaya Metallov Resaniya v Sel'skokhozyaystvennom Remontnom Proizvodstve, 1953

The specifications of the model 3N-42 grinding machine are as follows.

Maximum grinding diameter between centers -- 250 mm;

Height of centers -- 300 mm;

Maximum grinding length between centers -- 1,500 mm;

Maximum grinding length on supports (na kronshteynakh) -- 1,430 mm;

Dimensions of grinding wheels (diameter x width) -- 900 x 60 mm, 600 x 57 mm, and 600 x 32 mm;

Power of electric motor for grinding, wheel drive -- 5.5 kw;

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Speed of electric motor for grinding wheel drive -- 1,000 rpm;
 Power of electric motor for workpiece drive -- 1.3 kw;
 Speed of electric motor for workpiece drive -- 1,000 rpm;
 Speed of grinding wheel -- 680, 82, 980 rpm;
 Dimensions of machine tool (length x width x height) -- 3,100 x 1,950 x 1,630 mm;
 Approximate weight of machine tool -- 4,500 kg.
 [Book by I. A. Mishin]

MODEL 642K HYDRAULIC TRACER MILLING MACHINE -- Moscow, Stanki i Instrument, Jun 53

The Model 642K hydraulic tracer milling machine [] is intended for contour copying of connecting rods for internal combustion engines, blanking and trimming dies, etc. The machine will mill workpieces 250 by 400 millimeters in size. The specifications of the machine tool are as follows:

Spindle speeds	200-1,600 rpm
Power of main-drive electric motor	2.8 kw
Dimensions of machine tool	1,485 x 1,430 x 2,200 mm
Weight of machine tool	2,750 kg

The tracer milling machine was developed by Iosif Il'ich Knyazhitskiy, chief designer; and Iosif Yefimovich Safris, leading designer.

MODEL 5370 HORIZONTAL GEAR-HOBGING MACHINE -- Moscow, Stanki i Instrument, Dec 53

The Model 5370 horizontal gear-hobbing machine [] is intended for cutting spur, helical, and herringbone gears in one piece with the shaft, up to 600 millimeters in diameter. The machine tool can also be used for hobbing spline shafts and for single-thread and multiple-thread hobbing. The speed range of the hob is from 16 to 100 revolutions per minute. The power of the electric motor is 10 kilowatts. The machine tool is 5,960 millimeters long, 2,260 millimeters wide, and 2,400 millimeters high, and weighs 26 tons. The chief designer is Boris Alekseyevich Kudinov.

DOUBLE PRODUCTION PROGRAM IN 3 YEARS -- Vil'nyus, Sovetskaya Litva, 20 Dec 53

The Odessa Milling Machine Plant imeni Kirov is now fulfilling a program double that of the first year of the Fifth Five-Year Plan. The plant has perfected ten new types of high-precision machine tools.

A plan for organizational and technical measures is now being worked out at the plant. In particular, the constant-flow production of machine tools will be organized.

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PRODUCE RADIAL DRILLING AND DIAMOND BORING MACHINES -- Moscow, Krasnaya Zvezda, 29 Dec 53

The Odessa Radial Drilling Machine Plant completed the 1953 plan for the production of radial drilling machines several days ago. Each year this enterprise puts out more and more products. In 3 years of the Fifth Five-Year Plan, it has increased its volume of production 2.4 times. The plant has perfected dozens of new models of radial drilling and finishing machines, and of special diamond boring semiautomatics.

In 1953, the plant has made a considerable contribution in equipping enterprises which manufacture agricultural machines. It has also built machine tools for enterprises producing machines for the light industry and the food industry.

The Odessa Plant has sent diamond boring machines to the Chelyabinsk Tractor Plant for boring connecting rods for tractors. It has manufactured horizontal double-end (dvustoronnny), four-spindle semiautomatics for the Minsk Tractor Plant for boring pump covers and bush bearings. Machine tools produced by the Odessa Plant in 1953 are also in use at the Khar'kov Tobacco Machine Plant, at the Poltava and Dnepropetrovsk Meat Combines, and at transport and heavy machine building plants.

As a result of the wide application of advanced technology, labor productivity per worker has increased 15.6 percent in 1953 as compared with 1952. As a result of useful suggestions made by plant personnel, the plant will save 500,000 rubles in 1953 -- S. Mezentshev, director, Odessa Radial Drilling Machine Plant.

PERFECT EIGHT TYPES OF EXTRA-HEAVY MACHINE TOOLS -- Moscow, Izvestiya, 18 Dec 53

The Kolonna Heavy Machine Tool Building Plant has perfected eight types of unique [extra heavy] machine tools in 1953. In October, the plant put out four machine tools in excess of plan, including two gear-hobbing machines. In 10 months, the plant has saved hundreds of thousands of kilowatt-hours of electric power.

PROGRESS AT KRASNODAR PLANT -- Moscow, Pravda, 11 Dec 53

The Krasnodar Machine Tool Building Plant imeni Sedin has completed the 1953 plan ahead of schedule. Labor productivity at the plant exceeded the plan by 5 percent.

In 1953, the plant perfected two heavy machine tools: a special vertical boring mill for boring holes in the bottoms of high-pressure steam boilers, and a universal vertical boring mill for machining large parts.

WILL BUILD 340-TON MACHINE TOOL -- Moscow, Izvestiya, 26 Dec 53

Preparations are being made at the Minsk Machine Tool Building Plant imeni Voroshilov for the production of a unique machine tool which will weigh 340 tons.

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TBILISI PLANT BUILDS AND SHIPS MACHINE TOOLS -- Tbilisi, Zarya Vostoka,
18 Dec 53

The Tbilisi Machine Tool Building Plant imeni Kirov, one of the largest enterprises in the Georgian SSR, has in the past few months produced and shipped more than 400 universal lathes to MTS throughout the USSR. A large part of the products now being put out by the plant is being produced to satisfy agricultural needs.

Tbilisi, Zarya Vostoka, 23 Dec 53

In 1953, the Tbilisi Machine Tool Building Plant imeni Kirov increased its output of machine tools by 11.3 percent without substantially increasing its production area.

Besides increasing its volume of production, the plant has perfected new types of machine tools and machines. In 1953, it mastered the production of three pipe-processing machines and a multiroller machine for straightening aluminum pipes. It also modernized a series-produced universal screw-cutting lathe.

In 1954, the plant must solve even more complex problems. It must master the production of 15 new models of machine tools and machines. Among these is a special screw-cutting lathe for machining large parts for tractors and agricultural machines. The plant will be manufacturing 25 different models of machine tools in 1954. The total output of machine tools must be 16.8 percent greater than in 1953. All of this work will have to be accomplished without expanding the areas of basic production shops.

Parts for a universal screw-cutting lathe are machined and assembled in building No 2. In 1953, the output of lathes increased 13.2 percent as compared with 1952, without increasing the production area or installing new machine tools. This was achieved through the introduction of a new technique and advanced technology. For example, 670 attachments and 2,000 types of tools are now used in lathe production.

About 80 percent of forged lathe parts have been converted from smith forging to die forging. Consequently, the output of forgings has doubled from the same production areas and equipment. The further conversion of a large quantity of parts for various machine tools from smith forging to die forging is slated for 1954.

In 1953, a second unit for high-frequency hardening of parts was installed in building No 2, and a third unit of this type will be installed there in 1954.

The plant is organizing an experimental shop. To provide a location for the new shop without constructing another building, the room occupied by auxiliary services in building No 1 will be equipped, and the auxiliary services will be moved to another free area.

NEW DESIGN, METHODS TO INCREASE LABOR PRODUCTIVITY -- Yerevan, Kommunist,
2 Dec 53

A special feature of the new Model 1615-V screw-cutting lathe recently perfected by the Yerevan Machine Tool Building Plant imeni Dzerzhinskiy is the improved design of its feed box. The number of speeds has been increased from four on the old-type machine tools to 12 on the new one. Labor productivity in operating the 1615-V has increased 30 percent.

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Yerevan, Kommunist, 19 Dec 53

A brigade of Ukrainian engineers and designers, together with designers of the Yerevan Machine Tool Building Plant imeni Dzerzhinskiy have recently completed plans for re-equipping the Yerevan Plant and for converting the production of machine tools to a constant-flow system. This change-over will increase the production capacity of the enterprise 2.5 times.

The Plant imeni Dzerzhinskiy has completed an experimental model of a high-production screw-cutting lathe, Model 1615-V according to blueprints developed by Odessa machine tool builders.

The plant is now working on an urgent order received recently for Model 1615-M machine tools for Ukrainian agricultural needs.

Many enterprises in Kiev, Poltava, and Khar'kov are equipped with Yerevan machine tools. These machine tools have been installed at the Kiev Leninskaya Kuznitsa and Kiev Cinema Equipment plants, at the Khar'kov Dental Materials and Khar'kov Boiler and Radiator plants, at the Kiev X-Ray Equipment Plant, and at enterprises in Sumy, L'vov, and other cities.

A vertical drilling machine received recently from Odessa and many other machine tools built at Ukrainian enterprises have been installed at the Plant imeni Dzerzhinskiy.

For years, groups of foremen and engineers from the Plant imeni Dzerzhinskiy have gone to Odessa to take refresher courses for machine tool builders. The plant's technical library receives regularly the latest technical literature from the Ukrainian branch of Akademkniga [Academic Book Store?].

Yerevan, Kommunist, 31 Dec 53

In 1953, the Yerevan Machine Tool Building Plant imeni Dzerzhinskiy successfully perfected two new types of products, the Model 1615-V screw-cutting lathe [] and a stone-cutting machine designed by Stolyarov.

The blueprints for the Model 1615-V lathe were developed by Odessa specialists of Design Bureau No 3 of the Ministry of Machine Building USSR. The following persons helped to perfect the lathe: S. Kandayan, chief designer of the Yerevan Plant; A. Melik-Avetisyan, engineer-technologist; V. Gambaryan, engineer; T. Gasparyan, fitter and assembly man; G. Grigoryan, foundry worker; and A. Yepremyan, lathe operator.

Having eliminated certain design shortcomings in the first experimental model, the plant will begin production of the Model 1615-V and three other types of new machine tools, including the KT-3 screw-cutting lathe, in 1954.

Yerevan, Kommunist, 20 Dec 53

In 1953, the Yerevan Machine Tool Building Plant imeni Dzerzhinskiy has shipped screw-cutting lathes to MTS in Astrakhanskaya and Groznenskaya oblasts and to Dagestanskaya ASSR.

KRASNYI PROLETARIY PLANT AIDS AGRICULTURAL ENTERPRISES -- Kishinev, Sovetskaya Moldaviya, 31 Dec 53

In a conference with TASS correspondents, Vorob'yev, director of the Moscow Krasnyy Proletariy Plant imeni A. I. Yefremov, reported that in 1953 the plant

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produced about 40 types of metal-cutting equipment. It produced more than 1,800 Model 1A62 universal screw-cutting lathes for MTS in the Ukraine, Northern Caucasus, Siberia, and other regions in the USSR.

Plant personnel have considerably shortened the production cycle for manufacturing lathes. As a result, 2,000 more lathes were produced from the same production area in 1953 than in 1950.

New equipment for machine tools has contributed to an increase in labor productivity and a decrease in manufacturing costs. In 1953, for example, 2,000 fixtures and dies have been introduced for speeding up the production processes. The assembly and paint shops have been remodeled. Conveyers up to 120 meters long have been installed there, making it possible to produce several hundred more machine tools than specified by the plan.

The Krasnyy Proletariy Plant is manufacturing a large quantity of parts for agricultural machines such as planting disks for the SKG-4 potato planters, shafts and drums for potato-harvesting combines, etc.

In 1954, the plant will work on developing 15 new types of machine tools, including six- and eight-spindle semiautomatics for agricultural machine building, and unit-type machine tools for the metallurgical industry. Workshops at railroad depots, and textile machine building enterprises, will also receive equipment from this plant.

The output of special machine tools must be increased by 40 percent in 1954.

Moscow, Pravda, 16 Dec 53

About 100 engineers and technicians from Moscow and the Ukraine have arrived at the Orel MTS for permanent employment. Among these specialists is Shakhnevskiy, senior engineer, from the Moscow Krasnyy Proletariy Plant.

REORGANIZATION AT NOVOSIBIRSK PLANT TO INCREASE PRODUCTION -- Moscow, Izvestiya, 27 Dec 53

Personnel at the Novosibirsk Machine Tool Building Plant imeni XVI Parts'yezd have pledged to increase in 1954 the output of products from each square meter of floor space by 20 percent and the output of consumer goods by 33 percent.

Tool storerooms are now being removed from the assembly shop, where the assembly of special machine tools is taking place. New parts of more than 60 type designations are being converted to machining with large feeds. The number of machine tools operating under power and high-speed cutting conditions will more than double. Hoisting equipment in the electric power and repair shop is being modernized. To reduce the molding areas for furnace casting, the molders have perfected a method for dual casting of the sections of parts. This method has nearly doubled labor productivity.

CASTING MACHINE FOR PLASTIC PRODUCTS -- Moscow, Pravda, 10 Dec 53

Machine builders are expanding the output of high-production equipment for all branches of industry which produce consumer goods.

A series of automatic casting machines, which were designed at the Special Design Bureau of the Ministry of Machine Building in Odessa, have been manufactured at the Moscow Stankokonstruktorskiy Plant. The machines are intended for the

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mass production of various items made from plastic. The largest of these machines, the Model LM-1000, is adapted for the production of items weighing one kilogram, and the smallest machine, the LM-50, is for the manufacture of items weighing 50 grams.

All operations in the manufacture of plastic items are performed continuously and automatically. By changing the pressmold in the casting machines, the most diversified plastic products can be manufactured by the most modern and inexpensive method.

II. TOOLS AND INSTRUMENTS

TOOL AND MEASURING INSTRUMENT INDUSTRY, 1951-1952 -- Moscow, Stanki i Instrument, Dec 52

With the development of high-speed methods for machining metal, the Soviet tool industry began the production of face mills with interchangeable blades, making it possible to change the blades of a mill without removing the mill from the spindle. These mills are being produced in five type-sizes from 110 to 350 millimeters in diameter. Production of cylindrical mills 110-130 millimeters and 200-250 millimeters in diameter, as well as angular mills with hard-alloy tips, has also been started.

In the past 2 years, the production of universal and special-purpose threading heads has been expanded. The production of threading heads with circular chasers, not only for cutting internal straight threads, but also for cutting internal threads 40-60 millimeters in diameter, has been set up. Besides the RNCT No 1 and No 2 threading heads produced earlier, production of RNCT universal threading heads with tangential chasers for cutting straight and taper external threads from one to 2 1/2 inches in diameter has been mastered.

New special threading and boring heads for pipes and couplings have been perfected. Type TNOK pipe-threading heads of two type-sizes from 57 to 146 millimeters in diameter have been produced for cutting external straight threads on geological survey pipes (drive and core) and for threading nipples for such pipes. Correspondingly, type TVOK special pipe-threading heads of two type-sizes for internal threading of these pipes have also been produced. Straight flat threads of a special profile have been successfully cut on thin-wall pipes with these heads on Models 9192N and 9192 machine tools.

Multicutter heads of four types have been perfected and produced for cylindrical boring and turning of geological survey pipes before threading.

Coupling-threading heads of a universal type have been perfected for cutting taper and straight threads on 2-5-inch couplings.

TN4KA universal threading heads for threads 1 1/2-4 inches in diameter and TN6KA for threads 4-6 inches in diameter have been perfected for cutting straight or taper threads on pipes.

TN2K special-type threading heads with circular chasers have been produced for external taper threading of 1-3 inch pipes on Model 9140 machine tools. Type TNT-2 and TNT-3 heads with tangential chasers have been produced for cutting straight threads with the simultaneous removal of inner and outer chamfers on pipes from .5 to 3 inches in size.

The production of gear-cutting tools has been expanded, including inserted-tooth gear-cutting mills.

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Roughing hobs with a parabolical generatrix have been produced as ordered for productive gear hobbing.

One tool plant has installed special equipment for series production of worm shavers. Worm shavers for finishing gears with a module of 2.5-10 millimeters are being produced.

Broaches for broaching screw heads on a new rotary broaching machine have been perfected. The head of the screw is processed by a set of 16 broaches.

At present, more than 50 percent of the files being produced are heat-treated by high-frequency currents.

The wide introduction of constant-flow and mass production methods, with the introduction of automatics and high-production attachments and the mechanization of labor, have contributed to the increase in production at tool plants. At present, up to 100 constant-flow lines are in operation at tool plants in the production of cutting, measuring, and assembly tools, and of mass and series-produced files. These lines are also used in machining and assembly operations, including preparatory operations.

The products list of precision measuring instruments was expanded and the production of various multimeasuring instruments was organized in 1951-1952. The instruments include saddle-shaped instruments

for checking rolling mill rolls of from 800 to 1,500 millimeters in diameter. These instruments are equipped with dial indicators.

A new instrument is being produced for the composite double-profile checking of spur, bevel, and worm gears. It is equipped with a recording device and has a distance between centers of 50-300 millimeters.

The production of checking and measuring instruments, varying in complexity and purpose, was 2.5 times the 1949-1950 output.

An especially large number of automatics have been produced for checking and sorting bearing parts various moldings, resistors, glass parts for the electrical industry, automotive spare parts, etc. -- N. S. Degtyarenko

Moscow, Stanki 1 Instrument, Nov 52

More than 120 automatic measuring machines were manufactured in 1951 alone. More than 10,000 multimeasuring high-production instruments have been manufactured in the last 3 years.

INSTRUMENT FOR MEASURING INNER RING RACEWAYS -- Moscow, Stanki 1 Instrument, Dec 52

An instrument for measuring the diameter of inner ring raceways for Type 7815 roller bearings has been developed by the Design Bureau of the [former] Ministry of Machine Tool Building and manufactured at the Moscow Kalibr Plant.

The raceway is measured after grinding. If the diameter of the ring exceeds the permissible tolerance, a light signal goes on. In the event that three rejected rings pass through the measuring instrument in succession, the machine tool stops automatically.

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The time for measuring one ring on the instrument is 3.5 seconds. The error of measurement on the instrument is plus or minus 3 microns. The measuring pressure is 1.5 kilograms. The instrument is set up according to a master ring. All units of the instrument are housed in a cast iron frame which is mounted on the machine tool slide. -- N. K. Zolotarev

COMPLETE 1953 PLAN FOR INSTRUMENTS AND TOOLS -- Leningrad, Leningradskaya Pravda, 20 Dec 53

On 19 December, the Leningrad Tool Plant completed its 1953 gross production plan. In 1953, it mastered the production of a number of new complex instruments and tools, in particular, a small lever-and-gear-type micro-gauge (malogabaritnyy rychazhno-zuchatyy mikromer) which is being widely used in the bearing industry. Production of special automatic distributors for automatic transfer machine lines used in the manufacture of nuts at agricultural machine building plants has also been organized.

In the past 11 months, the plant's total volume of production increased 15.6 percent and its labor productivity 13.3 percent, as compared with the corresponding period of 1952. The cost of production has been reduced considerably and hundreds of thousands of rubles have been accumulated above the plan.

GEAR-MEASURING INSTRUMENTS -- Moscow, Vestnik Mashinostroyeniya, Jun 53

At the beginning of the postwar Five-Year Plan [1946], the Soviet tool industry produced only four types of gear-measuring instruments. Three of these types, which have been replaced with improved models, were produced by the Moscow Kalibr Plant. The fourth type, which is a gear-tooth vernier caliper for checking gears with a module of 1-18 and 5-36 millimeters, is being produced by the Kirov Krasnyy Instrumental'shchik Plant.

Developing the work started by TsNITMASH (Central Scientific Research Institute of Technology and Machine Building), the Bureau of Interchangeability and plants of the former Ministry of Machine Tool Building have worked out a number of designs for new gear-measuring instruments for inspecting gears while in production and in operation.

Machine tool building plants are now producing 22 types of instruments of 33 type-sizes for testing gears with a module of .15 to 50 millimeters and a diameter of one to 3,000 millimeters. The Soviet Union has completely freed itself from the necessity of importing gear-inspecting instruments.

Among the domestic gear-measuring instruments is the Model MT-2 single-profile rolling instrument [redacted] designed by Ye. V. Markov and B. A. Tayts. It is intended for composite testing of spur gears of small module (from .15 to one millimeter) and up to 76 millimeters in diameter.

An experimental rolling instrument for composite single-profile testing [redacted] determines the variations of instantaneous values for gear ratios of a kinematic pair consisting of the gear being checked (with a module of up to 7.5 millimeters and a diameter of up to 300 millimeters) and the master gear. The universal setting of both instruments for any gear ratio is done with an end block gauge. The error of the instrument is 5 seconds at an angle of rotation of up to 30 degrees, and 20 seconds at an angle of rotation of up to 360 degrees.

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In 1953, the Moscow Tool Plant has begun production of a shop-type instrument for composite single-profile testing of gears. In this instrument, the gear to be checked and a similar master gear mesh simultaneously with an intermediary gear. The instrument is simple in design and reliable in operation. It is intended for testing gears in mass production.

A universal lever-and-cam-type involute gear-measuring device produced by the Moscow Tool Plant is used for measuring gears up to 300 millimeters in diameter and with a module of .7 to 10 millimeters.

A lead measuring instrument (khodomer)

is slated for production for checking deviations in the lead of the helix of continuously rotating helical gears having an angle of slope of up to 45 degrees.

Among a group of instruments used for the kinematic testing of gears are the individual disk-type involute measuring devices designed at the Moscow Tool Plant. They are used for inspecting, under shop conditions, the profile of small and medium-module gears as well as slotters and shavers. These instruments are produced in three types. One type is for inspecting gears with a module of .3-1.5 millimeters and a diameter of 60-110 millimeters. The second type is for inspecting items with a module of 1-10 millimeters and a diameter of 45-240 millimeters. The third type is for inspecting items of these same sizes, and is equipped with a mechanical recorder.

An instrument for checking the identity of hobs and worms for lead as well as for pitch and profile was developed by L. M. Semenova.

An instrument for checking the circular pitch and radius (radial'nost') of a hob face after grinding was produced at the Moscow Tool Plant. This instrument will check hobs with a module of one millimeter or larger and a diameter of up to 150 millimeters. A shortcoming in this instrument was that the accumulated error had to be determined by calculations based on the measurement results. In 1953, the plant began manufacturing instruments in which this shortcoming had been eliminated.

A pitch gauge is intended for inspecting the base pitch of external spur and helical gears of all classes of accuracy according to GOST 1643-46. They are produced in three type-sizes, for gears with a module of 2-10, 8-20, and 18-36.

A contact gauge is intended for checking the rectilinearity of the contact line of helical gears of any diameter and with a module of 2-6.5 millimeters. Research conducted by TsNITMASH has shown that checking the rectilinearity of the contact line replaces to a considerable degree the inspection of helical-gear profile performed by the rolling method. The error of the instrument is equal to .002 millimeters for a length of 100 millimeters.

Instruments for the composite double-profile inspection of gears with a module of .2-1.2 and for checking the eccentricity (biyeniye) of spur, bevel, and worm gears with a module of 0.3-2 are used in the production of small-module gears for various special instruments and calculating devices. These instruments facilitate the processes of grinding, shaving, and generating small-module gears. The double-profile rolling instrument is intended for the composite inspection of small-module involute spur and helical gears up to 120 millimeters in diameter. With this instrument, the gear being checked meshes simultaneously with two racks having tapered teeth. One

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rack contacts the right profiles of the gear teeth and the other rack contacts the left profiles.

The use of racks with a module of 0.2 millimeters or greater has made it possible to inspect gears for the checking of which master gears are not yet being manufactured. The error of the instrument is 0.003 millimeters for a module less than or equal to 0.5 millimeters, and 0.005 millimeters for a module greater than 0.5 millimeters.

A biyeniye (eccentricity-measuring instrument?) is used for determining the variation of the distance of the basic form (iskhodnyy kontur) from the gear axis in checking spur and bevel gears of small module (from 0.3 to 2 millimeters) and with a diameter of up to 120 millimeters [A table in the source gives this diameter as 150 millimeters]. The instrument has a cone-shaped measuring tip with which the radial eccentricity (radial'noye biyeniye) of the toothed rim (zubchatyy venets) is checked. The thickness of the gear teeth can be checked at the same time by a special adjustment of the nominal position of the measuring tip provided in the instrument. The reading error of the instrument is plus or minus .002 millimeters.

Besides pitch gauges for checking the base pitch of gears with a module of 18-36 millimeters, the Leningrad Tool Plant also produces pitch gauges designed by S. I. Babkin, for checking the circular pitch of gears with a module of 3-15 and 8-26 millimeters, and tangential tooth gauges for gears with a module of 2.5-10, 8-36, and 30-50 millimeters. Variation of the base pitch of spur and bevel gears of all classes of accuracy (except the first class) can be measured with these gauges.

The Leningrad Tool Plant produces dial indicator gauges designed by TsNITMASH and the Bureau of Interchangeability, for measuring the length of the common normal (dlina obshchey normali) and determining the variation of its length in spur gears of all classes of accuracy according to GOST 1643-46 (with diameters of up to 450 and up to 900 millimeters).

The measuring ranges of other instruments now being series-produced at Soviet plants are as follows:

Measuring Range (mm)		
Instrument	Module	Diameter
Double profile rolling instruments for checking spur, bevel, and worm gears or pairs	1-8; up to 12	40-400; 150-1,000
Eccentricity measuring instruments for checking spur, bevel, and worm gears or pairs	1-10	40-240
Eccentricity measuring instruments for checking spur gears	1-10	up to 400
Micrometer calipers for checking spur gears	0.5 or larger	0-75; 75-150 150-225; 225-300

[Article by D. D. Malyy, engineer, and B. A. Tayts, Candidate of Technical Sciences]

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FMZ-5 GEAR-MEASURING TABLE -- Moscow, Stanki i Instrument, Jun 53

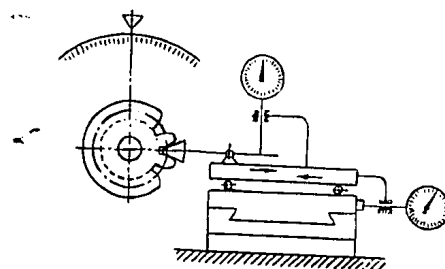
In the production of gears it is important to have a means of checking whereby not only the accuracy of a gear in operation, but also the technological causes for the occurrence of errors, can be determined. Since errors in the machining mechanism affect the gear being cut, deviations in gear elements being checked should be used as indexes for the accuracy of machine-tool set-up. At the same time, it is expedient to define the wheel elements being checked as independent errors. The following related gear errors should be checked:

- Δh -- Displacement of basic form (iskhodnyy kontur)
- Δt -- Accumulated circular pitch error
- Δf -- Tooth profile error
- Δe -- Eccentricity of toothed rim (zubchatyy venets)
- $\Delta \gamma$ -- Curving of toothed rim

The FMZ-5 gear measuring table can be used to measure all these errors, with the exception of profile errors, in spur, bevel, and worm gears.

Unlike existing gear-measuring instruments, the measuring tip of this gear-measuring table contacts the gear teeth only at the points of constant chordal diameter of the spaces.

The following sketch shows a gear mounted between centers of an optical dividing head and connected rigidly with a dial. The gear-measuring table is shown to the right of the gear.



The gear-measuring table is intended for inspecting gears with a module of .3 or more millimeters and with a maximum diameter of 260 millimeters.

The measuring pressure of the table does not exceed 250 grams. The dividing head scale is in one-minute graduations and the indicator scale is in .001-millimeter graduations. -- A. I. Ivantsov, Kh. M. Chavkin, N. I. Vetchinkina

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C-O-N-F-I-D-E-N-T-I-A-L

KV-7 ELECTRODYNAMIC PROFILOMETER -- Moscow, Stanki i Instrument, May 53

An experimental lot of KV-4 electrodynamic profilometers were produced in 1949-1950. The operation of the KV-4 profilometers has shown that they are completely adequate for measuring surface finishes under shop conditions.

A KV-7 profilometer [redacted] has now been developed, which differs from the KV-4 in its considerably greater measuring accuracy and universality of application. This instrument has been tested and approved for use throughout the USSR.

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The technical specifications of the KV-7 profilometer are as follows:

Purpose -- Measurement of surface finish

Principle of operation -- Tracer (oshchupyvayushchiy), electrodynamic

Criterion of evaluation -- Mean square deviation of the surface microprofile from the mean profile line in microns

Range of measurements -- From the fifth to the twelfth classes according to GOST 2769-51

Permissible reading error -- Plus or minus 15 percent (determined according to a basic form)

Tracer specifications

Radius of curvature, 10^{+2} microns

Angle of tracer-tip taper, 60-90 degrees

Material of tracer-tip, diamond

Measuring pressure specifications

Weight of moving system

(massa podvizhnoy sistemy), .10 grams

Rigidity of spring, .24 grams/micron

Minimum recommended pressure at the bottom of the valley, .3 grams

Speed of automatic drive -- 5 mm/sec

Voltage of power source -- 180-230 volts

Required power

Profilometer, 20 watts

Automatic drive, 10 watts

Weight of profilometer -- 11.5 kg

Weight of drive -- 6 kg

Dimensions of profilometer -- 350 x 320 x 160 mm

Dimensions of automatic drive -- 250 x 160 x 120 mm

Means of checking -- Glass plate with a surface finish of the ninth class.

[Article by V. M. Kiselev]

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C-O-N-F-I-D-E-N-T-I-A-L

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STATISTICAL ANALYZER FOR PRODUCTION CONTROL -- Moscow, Sovetskaya Kniga,
Aug 53

The P-1 statistical analyzer is a light and compact measuring instrument. When measuring parts, the instrument simultaneously indicates the size of the part being measured, a histogram of the practical distribution of measurements in the sample, the arithmetical mean, and the mean square value of deviation on the basis of given histograms. If the arithmetical mean is beyond permissible control limits, the instrument signals automatically. An instrument of this type can be used for setting up equipment and analyzing its accuracy, as well as for determining the qualitative characteristics of the samples and selections by the statistical method of control.

By supplementing the P-1 instrument with simple devices, it can also be used to measure outer diameters; the size of holes; the thickness of walls, shoulders, and bottoms; the depth of blind holes; and the height and length of parts. -- Book review, by A. N. Zhuravlev, of *Pribory i Avtomaty dlya Statisticheskogo Analiza i Kontrolya Produktsii v Mashinostroyenii* (Instruments and Automatic Instruments for Statistical Analysis and Inspection of Machine Building Output), by B. S. Bayburov

PERFECT NEW TYPES OF INSTRUMENTS IN 1953 -- Moscow, Pravda, Komsomol'skaya Pravda, 17 Dec 53

In 1953, plants of Glavinstrument (Main Administration of the Tool Industry) perfected more than 30 new types of inspecting automatics and measuring instruments.

MANOMETER PLANT COMPLETES PLAN -- Moscow, Moskovskaya Pravda, 13 Dec 53

The Moscow "Manometr" Plant (Manin, director) has completed its 1953 plan ahead of schedule. In 1953, the plant organized the production of instruments of 25 type designations.

By improving its production and by better utilizing its equipment, the plant was able to decrease the cost of manufacture of basic items by 18.2 percent and make a considerable profit above plan. Also, labor productivity was 5 percent above the plan.

PLANT PRODUCES HYDROMETEOROLOGICAL INSTRUMENTS -- Tbilisi, Zarya Vostoka, 11 Dec 53

The Tbilisi Gidrometpribor Plant produces 25 different types of instruments, which are sent to scientific research institutions, schools, new construction projects, and to the People's Democracies. Recently, the plant sent a consignment of bathometers, river flow meters, snow gauges, and other instruments to the Rumanian People's Republic.

The plant has shipped a large consignment of instruments to the Moscow office of Glavsel'snab (Main Administration of Agricultural Material-Technical Supply) for the use of scientific research organizations, experimental stations, surveying parties, and other groups serving agricultural needs.

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INSTRUMENT PLANTS COMPLETE 1953 PRODUCTION PLAN -- Moscow, Vechernyaya Moskva,
25 Dec 53

On 20 December, the [Moscow] Experimental Checking and Measuring Instruments Plant of the Ministry of Petroleum Industry USSR completed its 1953 plan for gross and commodity production. In 1953, the plant perfected ten new items and instruments, which included electronic potentiometers and automatic gas pressure regulators.

Moscow, Moskovskaya Pravda, 11 Dec 53

The Moscow TIZPRIBOR (Precision Measuring Instruments) Plant of the Ministry of Machine Building produces thermal measuring instruments for various branches of the national economy. It completed the 1953 commodity production plan on 4 December.

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III. EQUIPMENT FOR TEXTILE, POLYGRAPHIC, AND FOOD INDUSTRIES

MOSCOW FACTORY PRODUCES BOBBINS -- Moscow, Moskovskiy Komsomolets,
24 Nov 53

The Moscow Spool and Bobbin Factory imeni Dzerzhinskiy supplies almost three-fourths of all the bobbins used by the Soviet textile industry.

PLANT SHIPS FLAX-PROCESSING EQUIPMENT -- Moscow, Pravda, 21 Nov 53

Every month the Pskov Vydvizhenets Foundry and Machinery Plant ships dozens of carloads of equipment to enterprises engaged in the primary processing of flax.

Products of the plant are sent to all flax-growing regions. In October 1953 alone, machines and parts were sent to the Ukraine, Belorussia, and Latvia; to Chuvashskaya ASSR and Udmurtskaya ASSR; and to Kalininskaya, Smolenskaya, Kirovskaya, Novgorodskaya, and other oblasts.

CARDING MACHINES FOR TEXTILE ENTERPRISES -- Kiev, Pravda Ukrainy,
2 Dec 53

On 1 December 1953 the Leningrad Vulkan Plant shipped a large consignment of carding machines to the Chernovtsy Textile Combine.

Constant-flow lines and conveyers have been organized at the plant's shops. A finished carding machine comes off the conveyer every 2 hours.

Leningrad, Leningradskaya Pravda, 15 Dec 53

The Leningrad Vulkan Plant has recently sent seven carding machines for processing cotton to the Kherson Komsomolka Mill. This shipment completed the Vulkan Plant's 1953 plan for manufacturing equipment for Ukrainian textile workers.

In 1953, Leningrad textile machine building plants have sent more than 200 machines to the Ukrainian SSR for making silk and cotton fabrics.

NEW MACHINES FOR LIGHT INDUSTRY -- Leningrad, Leningradskaya Pravda,
23 Dec 53

The Leningrad Affiliate of the Scientific Research Institute of Textile and Light Machine Building has developed the G-6 combing machine. The new machine occupies about one half as much space as similar aggregates, and is considerably more productive.

The institute has also developed a new flat-bed hosiery machine for producing high-quality stockings made of caprone. The entire process for making stockings is automatic.

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An experimental footwear making aggregate which will replace three existing machines is now being assembled.

24-COURSE CIRCULAR KNITTING MACHINE -- Moscow, Vechernyaya Moskva,
2 Dec 53

The All-Union Scientific Research Institute of Textile and Light Machine Building has developed a circular knitting machine of new design for the production of fleeced fabric.

Ordinary knitting machines have four feeds located around a needle cylinder. The new machine has 24 feeds so that it can knit 24 courses in one revolution.

The size and weight of the machine, as compared with earlier models, were decreased by mounting the mechanism of the bobbins in the upper part of the machine and the fabric take-in in the lower part.

The newly developed machines are fully automatic and each has its own motor. An electrical signal automatically stops the machine in case the thread breaks, tightens on the bobbin, forms a knot, etc. A lamp flashes to indicate the place where the thread has broken.

A new interlacement which is used in the knitting machine will make it possible to increase the strength of the fabric, decrease its elasticity, and increase the firmness of the nap. The new interlacement will also ensure an even face. The use of such fleeced fabric can, for example, decrease the amount of rubber required in the manufacture of galoshes. The machine can knit not only plain, but also patterned, fabrics without using attachments. Only a bobbin with colored yarn need be inserted.

The new equipment has been successfully tested and has been recommended for series production. A designer from the institute has left for Leningrad to assist in setting up the production of these machines at the Vulkan Plant.

NEW VISCOSE-THREAD-MAKING AGGREGATE -- Moscow, Pravda, 19 Nov 53

The Leningrad Plant imeni Karl Marx of the Ministry of Machine Building, in cooperation with scientific research institutes, has developed the PN-300-12 machine for making viscose thread for cord used in the production of automotive tires. This machine unites into one process the operations formerly performed by several types of machines.

The machine will decrease considerably the cost of manufacturing cord, will effect a great saving in electric power, and will greatly decrease the number of servicing personnel.

The aggregate has three tiers, and is attended by three operators. The prepared viscose feeds along a tubing system through a thread former into a spinning bath located on the third tier. On the second tier the thread goes through finishing operations, when it is given greater elasticity. On the first tier it is dried and enters in finished form into a twisting and winding mechanism.

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The aggregate is 24 meters long, almost 7 meters high, and 120 tons in weight.

Designers at the Plant imeni Karl Marx are now planning a new improved aggregate, the PN-300-13. It will weigh 20 tons less than the PN-300-12, and will turn out thread at a 40-percent greater speed.

TESTS NEW BOBBIN SPINNING MACHINE -- Leningrad, Leningradskaya Pravda, 29 Nov 53

On 28 November, the Leningrad Plant imeni Karl Marx completed tests of a new bobbin spinning machine, Model PB-225 IKh, for producing silk-like thread from khlorin, a synthetic fiber.

The machine is 22 meters long and 7.5 meters high. It is made up of 2,000 type-designated parts and is arranged in two tiers. The threads are formed on the first tier. From here the thread is fed through glass tubes to the second tier where they are drawn, coagulated, and wound on bobbins. The aggregate produces 420 kilograms of thread a day.

A second machine of this type is now being assembled.

SHIPS SMALL TWISTING MACHINE -- Riga, Sovetskaya Latvija, 29 Dec 53

The Penza Penzmash (Penza Textile Machine Building) Plant has sent the first small twisting machine designed and built at the plant to the Balashikha Textile Mill. The new machine weighs 1,100 kilograms less than conventional machines. Three of the new-type aggregates occupy the same amount of space as two machines of the conventional type.

The plant's experimental shop is now assembling a small spinning machine, the P-88-4, designed by a group of engineers headed by Kuznetsov.

SERIES PRODUCTION OF NEW YARN MAKING-MACHINE -- Baku, Bakinskiy Rabochiy, 13 Dec 53

The experimental shop of the Tashkent Tashtekstil'mash Plant has finished testing the new P-83-III machine to be used for making woolen yarn.

The designs for most of the parts in the new spinning aggregate were copied from the cotton-processing machines developed by, and being produced at, this plant. The aggregate is equipped with a new drafting device with a needle-like comb.

The P-83-III has been approved for series production.

MODERNIZED WEFT SPOOLING MACHINE -- Moscow, Nauka i Zhizn', Dec 53

The Kamensk Machine Building Plant, located in Kirovogradskaya Oblast, recently finished building the first lot of modernized UPS-260-ShL weft spooling machines for silk weaving enterprises. The capacity of the new machine is 50 percent greater than that of the machines formerly produced.

FIRST SOVIET MERCERIZING MACHINE TESTED -- Moscow, Trud, 27 Nov 53

On 26 November, the Tashkent Machinery Plant of the Ministry of Consumer Goods Industry USSR conducted tests on the first Soviet experimental mercerizing machine. It is fully automatized, and the tests showed that it has a high productivity.

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Mass production of these complex machines will begin in 1954. With the use of these machines, tricot and thread (nitochnyy) mills will be able to impart a silk-like finish to cotton twist yarn.

The experimental machine was perfected by the plant in 6 months.

On 26 November, the plant began production of a squeezing press for bast fiber.

PRODUCES NEW AUTOMATIC LOOM -- Moscow, Izvestiya, 8 Dec 53

The Klimovsk Machine Building Plant is supplying the Soviet woolen industry with AT-175-Sh automatic looms for making suitings such as boston, gabardine, covert, tricot deluxe (lyuks), "udarnik," and cheviot. These new machines are being installed at the Kuntsevo Wool Finishing Mill, Monino Worsted Combine, Klintsey Wool-Fabric Mill imeni Komintern, Krasnyy Kholm Worsted Combine, etc.

Each weaver can easily operate four to six automatics, whereas formerly he could operate only two or three of the mechanical type.

Hundreds of these automatics are now in operation at woolen mills. One third of the equipment at the Kuntsevo Mill has already been replaced with automatics.

SERIES PRODUCTION OF IMPROVED LOOM BEGUN -- Moscow, Trud, 3 Nov 53

The Shuya Plant imeni Frunze has begun series production of improved looms for making high-quality, heavy-weight woolens and light-weight suitings.

Testing of the new equipment at the Shuya Wool Fabric Mill has shown that its productivity and ease of operation surpass that of existing machines.

A recess was made in the lay of the machine to protect the threads from being rubbed by the shuttle. An automatic brake ensures even density of the fabric.

The first looms of the improved design will be sent to the Yerevan Wool Fabric Mill and to one of the Lithuanian textile enterprises.

NEW FABRIC INSPECTING MACHINE -- Vil'nyus, Sovetskaya Litva, 19 Nov 53

The Kaunas Apviya Electrical Machinery Plant has built a machine, based on blueprints received from Moscow, for inspecting fabric. With this machine, a sewing enterprise can make a supplementary check on the quality and meterage of fabric received from textile mills.

From 3,000 to 4,000 meters of fabric can be checked on the machine per shift. Its inspection table is illuminated by daylight lamps, which will make it possible to check fabric 24 hours a day.

The first machine of this type has been installed at the Dobilas Sewing Factory. In the near future, these machines will be manufactured for all sewing factories in Lithuania.

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NEW WIRE-MAKING MACHINE -- Riga, Sovetskaya Latvya, 29 Jul 53

The Riga Machinery and Repair Plant of the Ministry of Railways has manufactured a new wire-calibrating machine. The new machine will make it possible to produce wire up to 12 millimeters in cross section.

POOR QUALITY OF POLYGRAPHIC MACHINES -- Moscow, Poligraficheskoye Proizvodstvo, Nov-Dec 53

Although Soviet polygraphic machine building plants have in the last 10 years made efforts to perfect new machines, modernize those that have been produced, and improve those being produced, they still have not given sufficient attention to improving the quality of these machines. Consumers complain about the poor quality and the breakdown or rapid wear of units and parts.

Although technical documentation is available on the heat-treatment of parts, frequently the parts are not heat-treated (for example, parts for the MK-20 and TK proof presses built by the Khar'kov Plant), or the parts are not properly heat treated (for example, parts for the DPI flat-bed press built by the Shcherbakov Plant).

Polygraphic equipment plants do not always conduct running-in tests on series-produced machines; they fail to eliminate shortcomings detected at printing houses, and ignore suggestions for improving the quality of the machines. The Scientific Research Institute of Polygraphic Machine Building limits itself to issuing information bulletins instead of taking specific measures to improve the quality of machines through Glavtochmash /Main Administration of Precision-Machine Building/. Sometimes the machines do not conform to the technical requirements of consumers. For example, the NSh-2 sewing machines, which have a great number of shortcomings, have been produced by the Leningrad Poligrafmash Plant for over 2 years, despite the many complaints of polygraphic enterprises.

In the last 2 years, polygraphic equipment plants have improved the quality and outer appearance of the DPP, DPG, and DPM flat-bed presses; the N-4 and N-5 typesetting machines; the 24TR and BR-3 papercutting machines; the PB-1 smashing machine; the TT-1 platen press; and the FV and FG-2 cameras (fotoapparat).

However, the quality of other machines is not satisfying the consumers. For example, the MP-400 embossing press /in stereotyping, a device for pressing the matrix on the compound form/ manufactured by the Shcherbakov Plant and installed at the Izvestiya printing house in 1950 has not yet been put into operation.

This is the fault of the Shcherbakov Plant. Printing houses complain about the quality of the BM type casting machine and the E material-ruling machine (material'nolinyeychnaya mashina) manufactured by the Leningrad Poligrafmash Plant, as well as the BN-2 bobbin-cutting (bobinorezal'naya) machine manufactured by the Romny /Polygraphic Machine Building/ Plant. The OP-2 packing presses (pakoval'nyy press) manufactured by the Shadrinsk Plant and installed at the Children's Book Factory in 1952 cannot be used. This is the fault of the Shadrinsk Plant.

Products made by the Khar'kov Polygraphic Machine Plant are of poor quality and are released to consumers with a great number of defects.

Polygraphic enterprises also complain about the poor assembly of complex machines manufactured by the Poligrafmontazh (Polygraphic Assembly) Trust. -- N. Leonidov

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NEW BOOKBINDING EQUIPMENT -- Baku, Bakinskiy Rabochiy, 14 Nov 53

The Khar'kov Poligrafmash Plant is producing electric machines and book stitching and binding equipment for enterprises of the polygraphic industry. The products list of the plant includes 11 types of machines and mechanisms. The production of these machines in 1953 increased 1.5 times as compared with 1952. The output of polygraphic equipment for village printing houses doubled.

The plant has built a rotary (karusel'nyy) type of machine for binding books with soft covers. The aggregate is equipped with special devices which mechanize all operations, from the application of glue to the final output of the product. This machine produces 13,000 copies per shift.

Production of a new machine, which will facilitate the insertion of books into their covers at book factories, has been mastered. Assembly of the first machine started on 11 November.

NEW RULING MACHINE PUT INTO OPERATION -- Leningrad, Leningradskaya Pravda, 17 Nov 53

The Leningrad Svetoch Factory has put the new RS-4 notebook-ruling machine into operation. The machine eliminates all manual work in the production of notebooks. It cuts rolls of paper into sheets of required size, rules the paper, inserts a blotting paper, applies the covers, and sews and stitches the notebook.

The machine can produce 170,000 notebooks per day. It was designed and built by plant personnel.

PLANT INCREASES FOOD MACHINE PRODUCTION -- Tbilisi, Zarya Vostoka, 24 Nov 53

The Tbilisi Machine Building Plant imeni S. Ordzhonikidze supplies equipment for the tea, wine making, and tobacco industries. In the first 10 months of 1953, the plant produced 46 percent more than in the corresponding period of 1952.

The plant has made definite gains in increasing labor productivity and in decreasing the cost of production, without expanding production facilities. Production was increased by fully using internal reserves and by further mechanizing labor-consuming processes. The plant is applying high-speed methods of machining metals with the use of hard-alloy cutting tools. At present, almost all of the workers concerned with machining metals use the newest types of cutting tools.

Mechanization of work in the loading and transporting of parts and of semifabricated and finished items has been carried out at the plant. Fork lifts are used for conveying heavy parts, and small electric cars are used for carrying parts and semifabricated items from one shop to another. Intraplant passage strips for the use of electric cars are covered with asphalt.

To increase further the output of machines for the food products industry and to improve the control over food machine building enterprises under the Ministry of Machine Building USSR, the Soviet government has created a new main administration, Glavprod mash /Main Administration of Food Machine Building/, and placed the Tbilisi Machine Building Plant imeni S. Ordzhonikidze under the jurisdiction. /The plant was formerly subordinate to the Ministry of Food Industry USSR (Zarya Vostoka, 12 September 1952)./ A design bureau will be organized at the plant in the first quarter of 1954. It will be responsible for planning new tea and wine making machines, as well as pouring machines and lines for the champagne industry. It will also be responsible for improving the design of old machines.

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The plants production in 1953 has increased 1.5 times as compared with 1952. In 1954, the output of machines is to be increased 20 percent as compared with 1953. -- G. Berdzenishvili, director, Tbilisi Machine Building Plant imeni Ordzhonikidze

PRODUCE EQUIPMENT FOR TRADE NETWORK -- Leningrad, Leningradskaya Pravda, 27 Nov 53

The Leningrad Trade Equipment Plant Of Lentehtorgsnab [Leningrad Technical and Trade Equipment Supply Organization] supplies trade enterprises and public eating establishments in Moscow, Leningrad, and other cities with equipment, and produces more than 60 types of products. In 1953, customers received from the plant 2,000 warehouse and ice cream carts, 40,000 aluminum measuring cups of various sizes, 3,000 special bread knives, and 15,000 stainless-steel griddles and trays for storing food products in showcases.

The plant has mastered the production of an apparatus for the luminescence analysis of vegetables and fruits. Recently it received an order from the Ministry of Trade USSR in which the great economic value of the apparatus was noted. The inventors of the apparatus have been rewarded with a premium. The plant has been assigned the job of producing 300 of these devices in 1954.

In 1954, the plant will begin series production of an installation for mechanizing the sale of potatoes. The first model of this installation, developed by the plant in cooperation with Leningrad State Planning Institute for Trade, has successfully undergone tests at one of the stores on Vladimirskiy Prospekt, 18. The installation consists of a conveyer which carries potatoes from the truck to the store's potato bin, and another conveyer which carries the potatoes to the sales counter. The installation considerably accelerates the handling of potatoes.

INCREASE PRODUCTION OF FOOD EQUIPMENT -- Frunze, Sovetskaya Kirgiziya, 26 Nov 53

The Rostov-on-Don Plant of Glavprodmas [Main Administration of Food Machine Building] provides food industry enterprises with equipment of advanced design.

An aggregate is being shipped to the Fergana Oil Mill for processing cottonseed. The second aggregate of this type is being completed for one of the oil plants in Odessa.

The first model of a high-production vegetable-drying machine has also been produced by the plant.

In 1954, the plant will expand the production of equipment for the canning industry. The output of autoclaves for processing canned products will be doubled.

PRODUCE MACHINES FOR FORMING PASTRIES -- Moscow, Vechernyaya Moskva, 25 Dec 53

The Moscow Mossel'prom Factory has completed assembling 25 rotary machines for forming sugared pastries. The machine is small in size and can process up to 700 kilograms of pastries per shift. Three people are needed to operate it.

The machines are intended for small food enterprises where pastries are made by hand. The first machines will be sent to Moskovskaya and Pskovskaya oblasts, and to Tyumen', Penza, Khar'kov, and other cities.

By the end of 1953, the plant will turn out 50 rotary machines. Two hundred more machines are slated for production in 1954.

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NEW MACHINES FOR FOOD INDUSTRY -- Frunza, Sovetskaya Kirgiziya, 13 Dec 53

The Novo-Troitsk Machine Building Plant, which makes a variety of machines for the food industry, is now perfecting new types of products. In January 1954, the enterprise will begin production of machines for breweries and confectioneries.

PRODUCES DAIRY EQUIPMENT -- Yerevan, Kommunist, 15 Nov 53

The Kirovakan Machine Building Plant produces machines for processing milk and dairy products.

In the first 10 months of 1953, the plant fulfilled its gross production plan by 103.7 percent. Production increased 32.6 percent as compared with the corresponding period of 1952. Labor productivity increased 4.5 percent, and the cost of manufacturing products was decreased 13 percent. The plant accumulated 230,000 rubles above plan. The turnover of working capital for 10 months was accelerated 112.5 percent as compared with the plan.

In this period, the plant saved 75 tons of ferrous metals and 1.4 tons of non-ferrous metals through the implementing of 26 valuable suggestions.

Plans are being made to build a machine and assembly shop as well as a press shop at the plant in 1954. -- S. Tatoyan, director, Kirovakan Machine Building Plant.

INCREASES PRODUCTION OF PASTEURIZERS -- Tallin, Sovetskaya Estoniya, 23 Dec 53

In 1953, the Pyarnu Dairy Equipment and Machinery Plant (L. Pyder, chief engineer) of the Ministry of Machine Building USSR has increased its production of pasteurizers 2.5 times as compared with 1952.

FULFILLS 1953 PLAN -- Moscow, Komsomol'skaya Pravda, 29 Nov 53

The Khar'kov Mekhanolit Machine Building Plant completed its program for 1953 on 27 November.

The plant perfected many new machines and mechanisms in 1953. Production of dishwashing machines was set up, and the first lot of devices for cutting bread was manufactured. Factory kitchens, restaurants, and stores throughout the country will receive an additional 500 new refrigerator compressors and more than 2,000 other machines of various types from this plant.

PRODUCES REFRIGERATOR SHOWCASES -- Tallin, Sovetskaya Estoniya, 4 Dec 53

The refrigerator cabinet shop of the industrial office of the Estonian Republic Council of Consumer Societies (ERSPO) has mastered the production of AK-250 refrigerator showcases designed by the Leningrad Institute of Refrigeration and Dairy Industry.

The showcase, which operates on electricity, can maintain a temperature of minus 20 degrees centigrade. For stores, kiosks, and other trading points where electric power is not available, the shop has developed a device operated by heat energy from a simple kerosene lamp.

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Twenty of these showcases will be produced by the shop by the end of 1953. Some of these will be sent to consumer cooperative stores in other republics. Six showcases have already been sent to Moskovskaya, Leningradskaya, and Novosibirskaya oblasts.

REFRIGERATOR TRUCKS NEEDED -- Moscow, Vechernyaya Moskva, 10 Dec 53

In a speech at an all-Union conference of trade workers on 17 October, A. I. Mikoyan, Minister of Trade, pointed out the need for expanding the refrigerator truck park by not less than 20,000 units in the next 2 or 3 years.

The Moscow Refrigerator Truck Plant of the Ministry of Food Products Industry USSR has done notable work in increasing its production capacity and perfecting the technology of refrigerator truck manufacture. The output of refrigerator trucks in 1952 was six times greater than in 1946. The enterprise now has the production capacity to turn out thousands of refrigerator trucks.

The plant has not utilized its potentials in increasing its output of refrigerator trucks because Glavprodmashtal' [Main Administration of Food Machinery Parts] of the Ministry of Food Products Industry USSR, to which the Moscow Refrigerator Truck Plant is subordinated, burdens the plant with work which could be done by any other machine building enterprise.

NEW ICE-MAKING AGGREGATE -- Frunze, Sovetskaya Kirgiziya, 1 Oct 53

The Odessa Presses Plant has mastered the production of high-power aggregates for making dry ice in 100-kilogram blocks.

Dry ice is being used not only to preserve food, but also in machine building to heat-treat metal parts and to press-fit bushings by the cold method.

From the first series of these machines, one press was sent to the Chirchik Electrochemical Combine. This aggregate weighs 30 tons and is 5.5 meters high. It makes 20 times more ice per day as other units now in use. Only one operator is needed to run the new machine, whereas four men were required to operate machines of older design.

PLANT COMPLETES PLAN -- Moscow, Vechernyaya Moskva, 19 Dec 53

The Moscow Iskra Plant completed its 1953 plan on 12 December.

TASHKENT PLANT COMPLETES 1953 PLAN -- Tashkent, Pravda Vostoka, 30 Dec 53

The Tashkent Machinery Plant of Uzglavrasmaslo (Main Administration for the Production of Vegetable Oils and Fats of the Uzbek SSR) has completed its 1953 production plan ahead of schedule. Compared with 1952, its output on the same production space in 1953 was considerably greater. In 11 months of 1953, the enterprise achieved capital accumulation of more than 1,300,000 rubles.

AUTOMATIC DEVICES FOR FOOD INDUSTRY -- Moscow, Vechernyaya Moskva, 25 Dec 53

An automatic device designed by S. Sokolov, senior scientific associate of the Central Scientific Research Laboratory of Checking and Measuring Instruments, will be put into series production at the Kiev Glavprodmashtal' [Main Administration of Food Machinery Parts], Plant. The device continuously measures the concentration of sugar syrups. It is equipped with a recording instrument.

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Moscow, Vechernyaya Moskva, 24 Dec 53

The Central Scientific Research Laboratory of Checking and Measuring Instruments of the Ministry of Food Products Industry USSR has developed two devices for use with a vacuum apparatus for boiling caramel. The devices are the RVK-2 automatic regulator and the ARKM-2 automatic device for cyclically emptying caramel from the vacuum apparatus. These devices will save much sugar and improve the quality of the caramel.

S. I. Sokolov, scientific associate, designed the RVK-2 automatic regulator.

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